

PERFORMANCE SPECIFICATION  
RESISTORS, VARIABLE, WIRE-WOUND, PRECISION,  
STYLE 2RR2104

This specification is approved for use by all Departments and Agencies  
of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the requirements for style 2RR2104, variable, wire-wound, precision resistors.

1.2 Part or Identifying number (PIN). Variable resistors covered by this specification must be identified by a PIN which must be in the following form.

Single-section (cup) resistors

<u>2RR2104</u>	<u>F</u>	<u>2</u>	<u>A</u>	<u>8</u>	<u>L</u>	<u>203</u>
Style (1.2.1)	Function and shaft length (1.2.2)	Class and center tap (1.2.3)	Resistance temperature characteristic (1.2.4)	Rotational life characteristic (1.2.5)	Function conformity tolerance and resistance tolerance characteristic (1.2.6)	Resistance (1.2.7)

1.2.1 Style. Style 2RR2104 is a similar style to RR2100.

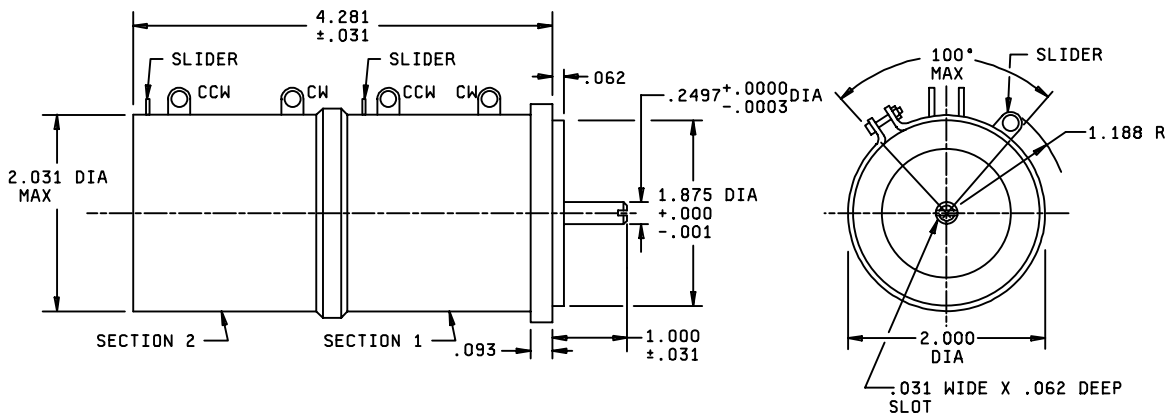
1.2.2 Function and shaft length. The function and shaft length applicable to this specification is identified by a single symbol F (see figure 1).

1.2.3 Class and center tap. The class and center tap applicable to this specification is symbol 2.

1.2.4 Resistance temperature characteristic. The resistance temperature characteristic applicable to this specification is symbol A.

1.2.5 Rotational life characteristic. The rotational life characteristics applicable to this specification is symbol 8.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Supply Center, Columbus, ATTN: DSCC/VAM, 3990 East Broad Street, Columbus, OH 43213-1193 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.



Inches	mm	Inches	Mm	Inches	mm	Inches	mm
.0003	0.008	.062	1.57	1.000	25.40	2.000	50.80
.001	0.03	.093	2.36	1.188	30.18	2.031	51.59
.031	0.79	.2497	6.342	1.875	47.63	4.281	108.74

Style	Turns	Maximum continuous Working voltage (volts)	Power rating (watts) 1/	Maximum starting and running torque				Stop torque (pound- inch)
				First cup		Second Cup		
				Starting	Running	Starting	Running	
2RR2104	10	500	5.0	2.0	1.0	2.0	1.0	35

1/ When ten-turn units are ganged, all cups shall be 75% of rated wattage

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.

FIGURE 1. Style 2RR2104

1.2.6 Function-conformity tolerance and resistance tolerance characteristics. The function-conformity tolerance and resistance tolerance characteristic applicable to this specification is symbol L.

1.2.7 Resistance. The nominal total resistance values and nominal resolution applicable to this specification is as follows:

First cup	20 kilohms (kΩ).
Second cup	20 kilohms (kΩ).

## 2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

### 2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

## SPECIFICATION

### DEPARTMENT OF DEFENSE

MIL-PRF-12934 - Resistors, Variable, Wire-wound, Precision, General Specification for.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Defense Automated Printing Service, Building 4D (DPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

## 3. REQUIREMENTS

3.1 General. The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-12934.

3.2 Interface and physical dimensions. The resistors shall meet the interface and physical dimensions specified in figure 1.

3.3 Mechanical travel. The mechanical travel shall be 3600 degrees +80 degrees, -0 degrees (+40 degrees at each end) for both cups.

3.4 Actual electrical travel. The theoretical electrical travel shall be 3600 degrees +1 degrees, -0 degrees.

3.5 Function. The type of function applicable to this specification shall be independent linearity.

## 4. VERIFICATIONS.

4.1 Sampling and inspection. Sampling and inspection procedures shall be in accordance with MIL-PRF-12934.

4.2 Extension of qualification. Manufacturers who have passed the qualification requirements, and have been approved and listed on or approved for listing on the qualified products list (QPL), for style RR2100, will be approved for style 2RR2104.

## 5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

## 6. NOTES

(This section contains information of general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The intended use specified in MIL-PRF-12934 will be applicable to this specification.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification, and the complete PIN (see 1.2).
- b. Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of the individual documents referenced (see 2.1).
- c. Packaging instructions (see 5.1).

6.3 PIN. This specification requires a PIN that describes technology and appropriate references to associated documents (see 1.2 and 3.1).

6.4 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the change.

Custodians:  
Navy - EC

Preparing activity:  
DLA - CC

(Project 5905-1512-22)